

**AMENDMENTS TO THE SPECIFICATION**

**Please amend the specification as follows:**

**Page 12, the first full paragraph is amended as follows:**

R1  
The ink cartridge of Fig. 1 is equipped with a container body 1 containing ink K, an ink supplying opening 2 for supplying the ink K within the container body 1 to the external of the container body 1 and an actuator 106 for detecting a consumption state of the ink K within the container body 1. The container body 1 of the ink cartridge according to the present embodiment has a supplying opening forming side wall 1010 on which the ink supplying opening 2 is provided and arranged and an opposed side wall 1015 opposing to the supplying opening forming side wall 1010. The container body 1 is provided with an annular member 4, forming the ink supplying opening 2.

**The paragraph beginning on page 12, and ending on page 13 is amended as follows:**

R2  
The actuator 106 is not protruded to the external by providing and arranging on the internal wall of the container body 1. Therefore, the appearance of the ink cartridge is approximately same with the outline of an ink cartridge in which the actuator 106 is not provided and arranged except that the external ~~terminal 7~~ terminal 107 is protruded. Therefore, a large modification in a design such as the specification of a holder of an ink cartridge of an ink jet recording apparatus is not accompanied by physically changing the outline of the ink cartridge.

**Page 24, the first full paragraph is amended as follows:**

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Q3 It should be noted that the characteristic value detecting section 810, the characteristic value judging section 820, the ink consumption volume measuring section 830, the output section 840 and the storage section 850 may be provided and arranged inside of the ink jet recording apparatus, for example, provided and arranged within the control section 750, or may be provided and arranged in the device which is provided and arranged outside, for example, in the external host computer. Preferably, the characteristic value detecting section 810, the characteristic value judging section 820, the ink consumption volume measuring section 830, the output section 840 and the storage section 850 which are concerning the operation of the piezoelectric device are provided and arranged in the ink cartridge. In consideration of the case where members concerning the operation of the piezoelectric device are out of working order, it is preferable that these members are configured to be able to be exchanged at the same time of the exchange of the ink cartridge. Furthermore, the characteristic value detecting section 810, the characteristic value judging section 820, the ink consumption volume measuring section 830, the output section 840 and the storage section 850 which are concerning the operation of the piezoelectric device may be provided and arranged on the recording head which is mounted on the ink jet recording apparatus to/from which the recording head is easily attachable and detachable. The control section 750 includes head control means 724 and pump control means 728. The head control means 724 controls the head drive means 742. The pump control means 728 controls the pump drive means 744.

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**Page 57, the first full paragraph is amended as follows:**

GH  
Fig. 15 is a perspective view showing a configuration integrally forming the actuator 106 as a mounting module body 100. The module body 100 is equipped on the predetermined location of the container body 1. The module body 100 is configured so that it detects a consuming state of the liquid within the container body 1 by detecting at least a change of acoustic impedance in the ink liquid. The module body 100 of the present embodiment has a liquid container mounting portion 101 for mounting the actuator 106 on the container body 1. The liquid container mounting portion 101 is configured such that a circular cylinder portion 116 containing the actuator 106 for oscillating by a drive signal is mounted on the base 102 whose plane is approximately rectangular. Since it is configured so that the actuator 106 of the module body 100 cannot be contacted from the external when the module body 100 is equipped on the ink cartridge, the actuator 106 can be protected from contacting it from the external. It should be noted that an edge of tip side of the circular cylinder portion 116 is formed in a round shape, and it is easily interfitted when it is equipped in the hole formed on the ink cartridge. The module body 100 includes leads 104a and 104b connected to the actuator 106.

**Page 62, the first full paragraph is amended as follows:**

GS  
Fig. 21 shows the details of the periphery of a head portion of an ink jet recording apparatus. The ink jet recording apparatus has an ink inlet portion 182, a holder 184, a head plate 186, and a nozzle plate 188. Multiple nozzles 190 for injecting the ink are formed on the nozzle plate 188. The ink inlet portion 182 has an air supplying opening 181 and an inlet 183.

Q5  
Cont'd

The air supplying opening 181 supplies air to the ink cartridge 180. The ink inlet 183 introduces the ink from the ink cartridge 180. The ink cartridge 180 has an air inlet 185 and an ink supplying opening 187. The air supplying inlet 185 introduces the air from the air supplying opening 181 of the ink inlet portion 182. The ink supplying opening 187 supplies the ink to the ink inlet 183 of the ink inlet portion 182. The ink cartridge 180 introduces the air from the ink inlet portion 182, thereby urging the ink supplying from the ink cartridge 180 to the ink inlet portion 182. The holder 184 communicates the ink supplied from the ink cartridge 180 via the ink inlet portion 182 to the head plate 186. The ink is supplied from an ink cartridge 180 to the head via an ink introduction section 182, and discharged from the nozzle to the recording medium. Owing to this, the ink jet recording apparatus performs the printing on the recording medium. It should be noted that in Fig. 20 and Fig. 21, the other portions are shown while omitting the actuator 106. The holder 184 includes an ink passage 189.

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